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ABSTRACT

This plan is designed to review and revise the educational program of the Hicksville School District (New York) by means of a systematic approach to curriculum revision, instruction geared to learning, and the monitoring of student progress. Baseline information obtained from a curriculum inventory is a starting point for an analysis of the curriculum. An example is given of the subject of English from kindergarten through grade 12. The curriculum is then analyzed for sequence, duplication, gaps, relevance, and omissions. The objectives that act as guidelines during the curriculum revision process are listed, as are teacher problems that can be solved by curriculum revision. The final section of the paper discusses instruction for mastery learning, quality control through internal audition, and the roles of the principal and the central office. (Author/MLF)

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PLANNING FOR MASTERY LEARNING AND ACCOUNTABILITY

by

Wilber Hawkins

*Paper presented at the Third Annual Summer Conference of the American Association of School Administrators, held in Chicago, Illinois, July 6-9, 1980).

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By Wilber Hawkins

PLANNING FOR MASTERY LEARNING AND ACCOUNTABILITY

For the most part, comprehensive educational planning in school systems, even in this enlightened age, is nonexistent. For certain, teachers develop and carry out lesson plans, principals plan faculty meetings and others plan in-service meetings. But, there is often little, if any, relationship from one activity to another and worse there is no link between system-wide goals or priorities and other purposeful activities. Program planning, where it does exist, is fragmented and serves special needs or requirements. A notable example of this type of required planning is the current programs for the handicapped. In New York, as is true in other states, students who are admitted to special programs for the handicapped must have a planned program tailored to meet their specific needs. This plan must include a pre to post test on the student's progress, in addition to a narrative description of the quantifiable growth made toward performance objectives. There is little doubt this extensive planning and monitoring of student progress only happened because of state mandates. Sadly, this process hasn't reached the mainstream.

The long delay in educational planning may be over! Citizens who perceived the educational profession as non-responsive to their concerns have sought redress in state legislatures, as was the case in special education. As a result, in state after state we are witnessing such mandates as accountability legislation and minimum competency requirements for schools. In addition, the back-to-basics movement has emerged as a significant campaign issue for elected school boards. It has become increasingly difficult for educators to defend such realities as declining test scores and the fact that a sizable number of students' learning potential is not being realized in our schools. In addition, once familiar pleas for additional funds to solve these problems is falling on deaf ears. Planning is the one alternative for restoring credibility to the schools. Total educational planning for accountability, even though new to the scene, can be achieved with current and available technology.

There are certain specific components to educational planning for accountability. They include:

1. A performance-based curriculum stated in learner-outcome terminology.
2. Knowledge by the teacher of the prerequisites for what is to be learned.
3. Knowledge of the student's entry level skill for what is to be learned.
4. Knowledge of individual student's learning style or preference.
5. Knowledge and availability of alternative instructional strategies, including accompanying materials.
6. Ongoing feedback data on student performance.

THE PLAN

This plan is designed to review and revise the educational program of the Hicksville School District by means of a systematic approach to curriculum revision, instruction geared to learning, and the monitoring of student progress. To that end, the plan is designed around the following criteria:

1. All educational planning activities are to be directed toward achieving student learning and instruction as a means to that end.

2. Curriculum will be stated in learner outcome terminology.

3. The school district should operate as a system. That is, it should be characterized by:

   a. Goal-orientation and a specific set of well-defined objectives, even though composed of separate parts.
   b. The capability to assess the degree of success in meeting its objectives.
   c. The implementation of corrective measures if objectives are not being met.

4. Any plans for change or innovation must include consideration of all other areas of the district which are affected by that change.

Background

An extensive survey involving representatives of the community, teachers, and administrators produced five curriculum areas requiring overview and possible revision during the 1979-80 school year as one of the overall district priorities for the year. "Overview" implies examination or review of these curriculum areas for probable revision. The rationale for this assumption was prompted by the numerous concerns expressed by professionals and citizens alike of a lack of articulation between grades, and made more urgent by a lack of such assessment in the district for some time.

The five curriculum areas identified as priorities included reading, mathematics, socials studies, science, and language arts. This plan is designed to be generic and is expected to be applied to other curriculum areas in the future.

INVENTORY OF THE REAL CURRICULUM

A curriculum review or inventory is a means of identifying what is currently being taught. A more precise professional statement might be: to identify the current or "real curriculum." English[1] refers to this as "the bottom line, the thing that is or is not coordinated, articulated, alive, repetitious by design or default." Unlike many efforts aimed at philosophizing as to the future requirement of education, this approach aimed to find out, for better or worse--and without penalties--the actual content of the classroom. The best, and perhaps the only way to do that was to ask those mainly responsibile for executing the curriculum--teachers. Teachers should be asked to inventory their own classroom curriculum by having them put to paper their actual content and the interactive activities they conduct with students.

It is acknowledged that this process has certain cautions. Teachers may be tempted to write what they "think" is desired, or to copy the material from the district curriculum guide or textbook.[2] Second, teachers may be concerned that penalties will follow "wrong" statements. Results based in either of these concerns or any other data that is anything other than the "real curriculum" will distort the results and make the process difficult.

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[1] Fenwick W. English, Quality Control in Curriculum Development, American Association of School Administrators, 1978 p.26

[2] Op. cit. p.29

Figure I

HICKSVILLE PUBLIC SCHOOLS
Hicksville, New York

Classroom Curriculum Inventory

Subject _____ Teacher _____

Grade _____ School _____ Date _____

1. List an overview of topics covered in broad general terms. How much time do you spend on a topic (days, weeks, months)?	
2. List sub-topics in further details which describe what is covered in each of the topics above.	

Classroom Curriculum Inventory

3. What would you expect the student to have learned at the end of the term?	
4. How would the student demonstrate to you that the learning has occurred?	
5. Comments, suggestions, recommendations.	

ANALYSIS OF THE VERTICAL CURRICULUM

The baseline information obtained from the curriculum inventory is a starting point for an analysis of the curriculum. It represents "what is." The inventory process enables planners to "lay out" the real curriculum. For pooling purposes, subjects are included in the vertical curriculum when reported, on the inventory, by 3/4 of the teachers in any one grade level. The analysis of the vertical curriculum is a two-step process. The first step unfolds a subject. It displays, by grade level, the vertical topics as reported by teachers.

The example in figure II unfolds the subject of English from kindergarten through grade twelve. The results of the curriculum inventory revealed data that will be sequenced in this fashion:

Figure II

Content/Topics Studied
ENGLISH

The English language arts curriculum is concerned with the communication of ideas through activities interrelating listening, speaking, reading, and writing.

Instruction in reading is a major objective of the program. Literature and the mass media are studied in all their forms. Communication skills are developed. The total program fosters individual growth, increased understanding of life, and the acquisition of ethical values.

Grades Kindergarten Through 4

ORAL AND WRITTEN COMMUNICATION

Observing and Listening: Developing visual and auditory discrimination - Selecting main ideas and significant related details - Discriminating between fact and opinion - Following sequence - Understanding cause/effect relationships - Predicting outcomes - Making generalizations.

Expressing Ideas Orally: Organizing ideas for oral presentation - Learning skills of conversing, discussing, reporting, storytelling - Participating in creative dramatics, choral speaking - Developing skills of pronunciation, articulation, intonation, volume control.

Expressing Ideas in Writing: Organizing ideas for written composition - Composing stories, reports, letters, verse - Developing skills of spelling, handwriting, capitalization, punctuation.

READING AND LITERATURE

Word Power: Recognizing the alphabet - Building sight vocabulary - Decoding new words by phonic and structural analysis.

Initial Comprehension Skills: Getting the main thought - Finding and relating details - Determining sequence - Drawing inferences - Making generalizations.

Work-Study Skills: Following directions - Using parts of a book - Skimming - Map reading - Organizing information.

Oral Reading: Conveying mood and feeling - Using voice with attention to volume, stress, pitch, pause, rate, pronunciation, phrasing.

Multi-Ethnic Literature: Folk and fairy tales, fables, myths - Biblical, animal, realistic, modern imaginative stories, Biographies - Rhymes and poems.

LANGUAGE STUDY

Nature and History of Language: Tracing development of the English language - Dialects - Current English usage.

Language Growth: Expanding vocabulary - Perceiving relationship between word choice and effective communication.

Science of Language: Basic sentence structures - Word order and meaning - Subject and predicate - Noun and verb.

Grades 5 through 8

SPEECH AND COMPOSITION

Listening and Speaking: Identifying significant ideas - Reacting critically - Appreciating and enjoying form and content of oral messages - Speaking in large and small groups - Engaging in role-playing, creative, and formal dramatics - Interpreting prose and poetry, individually and chorally.

Oral and Written Expression: Developing basic skills for effectively stating and organizing ideas - Using skills in narrative, expository, descriptive, and persuasive writing.

READING AND LITERATURE

Basic Skills: Mastering comprehension and work-study skills - Using critical awareness to make inferences and to discern the author's purpose.

Intensive and Extensive Reading for Appreciation and Enjoyment: Reading works by authors of all ethnic groups - Reading to develop an awareness of effective writing - Exploring mass media.

Library Skills: Selecting books with discernment - Using the card catalog - Locating information.

LANGUAGE STUDY

Nature of Language: Learning the changing aspects of language, its sound system, and its relationship to written symbols - Understanding language as a system and the role of standard usage.

Language Growth: Extending vocabulary and sentence knowledge - Exploring word derivation (etymology).

Grades 9 through 12

SPEECH AND COMPOSITION

Oral Techniques and Interpretation: Engaging in person-to-person and individual-to-group activities, public speaking, group discussion, and parliamentary procedure - Interpreting roles in plays, poems, stories, or nonfiction - Applying radio, television, and theater techniques.

Writing: Using formal written English to meet all occasion - Knowing forms of writing - Mastering mechanics and fundamentals of style - Extending expository writing.

READING AND LITERATURE

Comprehension, Critical Reaction, and Enjoyment: Intensive reading and extensive reading of difficult works - Learning complex skills in reading - Developing discriminating taste in leisure-time reading - Acquiring habit of reading for information and enjoyment - Appreciating multi-ethnic literature and mass media.

Library Research Skills: Apply skills to find information on difficult and extended subjects.

LANGUAGE STUDY

Language Power: Varying levels of language to meet situations - Using standard English for formal occasions - Awareness of the emotional effects of language.

Grammar and Language Systems: Comprehending historical changes and the interrelationship of languages - Applying learnings of the many grammars to manipulate and understand language - Learning about changes in meaning, word forms, and structure during major historical periods.

The above example illustrates a vertical curriculum in English. Displayed in this manner, analysis is possible. In this state the curriculum can be analyzed for the following:

1. Sequence: Is there a plan for the logical unfolding of topics from one grade level to the next?

2. Duplication: Are topics covered only once? If there are duplications, were they planned for sound reasons?

3. Gaps: Are topics begun, left out, and picked up later in higher grades?

4. Relevance: Are the topics or content suitable from the standpoint of grade level or student maturity, and are they educationally and philosophically sound?

5. Omissions: Are topics left uncovered in the curriculum?

It will be helpful to compare the stated vertical curriculum with other "respectable" guides developed and in practice elsewhere.

CURRICULUM REVISION

Revision is a step designed to improve the curriculum as presented. The following objectives could act as guidelines during the revision process.

1. Articulation of content between grade levels (vertically) and consistency among teachers teaching the same subject on the same level (horizontally) will be achieved.

2. All final curriculum will be stated in learner outcome terminology.

3. Consideration will be given, where feasible, to a continuous progress format in skill areas.

4. Topics will be relevant and suitable.

5. Curriculum objectives will be sequenced in a hierarchy where applicable.[3]

The process of curriculum revision will include teachers, because the final product must be perceived by teachers as leading to solutions of problems they perceive. The following kinds of teacher problems can be solved by curriculum revision.[4]

1. Pupil Unpreparedness: The establishment of a well-defined articulated curriculum can solve teachers' frequent concern that students are entering their classes without the necessary prerequisites for the new grade level materials.

2. Pupil Diversity and Instructional Alternatives: Adequate curriculum revision, which leads to a more precise curriculum, can assist teachers to identify earlier pupil entry-level skills for a subject and will serve as the basis for diversity and instruction.

3. School System Responsibility to Provide Adequate Resources: Adequate curriculum planning will help teachers to sort out their responsibilities and to fix the responsibilities of other officials within the total decision-making scheme of things. Instruction must be supported by others with timely resources, materials, student data, etc., in order for teachers to perform their roles adequately.

4. Realistic Expectations of Teacher Impact: The process of curriculum revision, particularly when stated in performance terms, will clarify expectations; teachers will begin to see the range of their responsibilities. This leads to less anxiety and the more productive use of teacher talent.

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[3]Benjamin S. Bloom, Editor. Taxonomy of Educational Objectives, David McKay Company, Inc., New York, 1968

[4]English, p.29

5. A Base for Collegial Interaction and Collaboration: Relationships can be developed in staff collaborative working groups that are often missing outside a teacher's small circle of colleagues. This process can remove traditional stigmas and result in a give-and-take atmosphere in which everyone's growth and understanding is nurtured.

This extremely important step in the master plan requires a team of professionals that include: an academic resource (this may or may not be a member of the Hicksville staff), practicing teachers who represent areas and levels being considered for revision, building principals, and central office representatives.

BOARD ADOPTION

Once the curriculum is completed, it should be recommended to the Board of Education for adoption. The board is asked to conduct public hearings prior to final action, and, indeed, board trustees may add to the proposed curriculum as they deem necessary. An adopted curriculum becomes, in the words of Leon Lessinger,[5] Educational Policy Demands. Educational policy demands are expectations for which the board holds the superintendent and his staff accountable, just as they would the implementation of any policy. The board at this point has every right to expect that students will learn what the adopted curriculum specifies. Prior to this point, aaccountability in the truest sense is not possible.

INSTRUCTION FOR MASTERY LEARNING

Mastery Learning[6] is a philosophy about teaching which asserts that under appropriate conditions virtually all students can and will learn what is being taught. Under this philosophy, learning is the goal of instruction. Mastery learning concludes that if learning hasn't occurred, then teaching hasn't taken place. It is the management of learning with the forethought that all students will achieve (and achieve excellence) instead of the view that classifies students as slow, average, or fast learners. Mastery learning dispels the application of the "normal curve" in teaching.

In order to carry out this philosophy and manage learning so that all students achieve excellence, it is necessary that certain factors, in addition to a learning outcome curriculum, be present and available to the instructor. They include:

1. Knowledge of the Prerequisites for What is to be Learned: All too often teaching takes place in a vacuum, minus the knowledge of students' past achievements in that area of study. A starting point to managing student learning is the establishment of a detailed set of prerequisite skills and knowledge that must be possessed by the student, and onto which additional instruction may be built.

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[5] Leon M Lessinger, expressed in a personal conversation with the author in 1973.

[6] Benjamin S. Bloom, Human Characteristics and School Learning, McGraw-Hill Book Company, 1976.

2. Knowledge of the Student's Entry Level Skill for That Which is to be Learned: Once teachers understand what is to be learned, including the prerequisites, it naturally follows that they must gauge the relation of individual students to it. This will require a diagnostic assessment designed around the learning expectations for success in that subject, grade level, or unit. It goes without saying that this assessment will reveal students who are at divergent entry points. This will then enable the teacher to truly "take the students where they are, etc."

3. Knowledge of Individual Student's Learning Style or Preference: How a student learns is an extremely important influence on his/her success in the classroom. In the past, it was just assumed, when some students failed to understand what was being "taught," that "some kids have it and others don't." We know now that this attitude has done great harm to some students, and blunted their true learning potential.

Research[7] has recently pointed to the fact that not only do people of all ages learn in ways that differ dramatically, but certain students achieve only through selected methods—methods that may not produce results for other students. It is a sad fact that many experienced, sensitive teachers realize that students learn differently, yet they continue to teach all students the same way and end up failing those who don't learn!

When students are taught with methods and materials that complement their learning characteristics, their motivation for learning increases, and achievement follows.[8] There are different terms and elements used to describe learning styles, but all researchers agree on one fact—that students learn differently, and learning is enhanced when teaching is paired to learning style.

4. Alternative Instructional Strategies and Materials: Basic to mastery learning is that, when a student is experiencing difficulty with the presented form of instruction, teachers should shift to an alternative method. Implicit in this tenet is that teachers have access to different instructional methods and that they obtain ongoing feedback on individual student's progress. This cyclical process is the essence of managing learning.

QUALITY CONTROL THROUGH INTERNAL AUDITING

The role of the superintendent and his management team, which includes principals, is to insure that board policies are fulfilled in the district. Certainly, this should be no less the case in the area of instruction. The only way the superintendent can assure board memebers, and through them the community, that their mandate (curriculum) for the schools is being achieved, is through a system of collecting and interpreting data on the quality and quantity of learning that is occurring in the classroom.

It is recognized that the very mention of a term like quality control is certain to elicit some concern. Probably the main reason educators do not make greater use of control processes is that they dislike the concept and fear the implications. Most likely, they dislike the concept because they do no understand fully what it means. For many, it connotes manipulation and exploitation of workers

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[7] Rita S. Dunn and Kenneth J. Dunn, Learning Styles - Teaching Styles: Can be Matched, Educational Leadership, January, 1979, p. 238

[8] Karen B. Greim, Cognitive Style and Its Implication for Media Selection, A paper presented for the Specialists Degree at the University of Northern Colorado, 1977. Chapter II

by management. Others see control as depersonalizing and inhumane, as a threat to freedom and autonomy. Obviously, we must deal with these concerns. The concerns are valid even if the rationale is not.

> "Control really is no more than a useful metaphor. It is perhaps best understood in the context of the human body. It is a homeostatic function concerned with the equilibrium and survival of the organism. Control "tells" when we should eat and rest, when we should fight or run. Some call this control dynamic equilibrium. Indeed, control is every bit as important to organizational health as it is to health and survival of the human body. Control is a means of checking, verifying, and comparing what exists with what is intended."[9]

In the past, we have subsumed this process under "evaluation." But control is more than evaluation. Control requires action in response to evaluation. Control is a verb as used here; it is active. Evaluation is, in and of itself, passive and requires no action. Control is designed for timely remediation and cannot occur unless there are the means for a warning system to inform the manager (teacher, principal, superintendent) that intolerable deviations from established standards exist. In education, we have not had an adequate early warning system. Rather, we have a coroner's report, usually in the form of standardized test scores released well "after the fact."

It makes no difference, however, how many warning bells go off as a result of our control system if our curriculum and learning expectations are mushy and ambiguous. Learning expectations are at the heart of any control system and dictate what we are going to be responsive to. If, for example, the standard for graduating from high school is based primarily on the amount of time spent in school rather than the quality of performance, one hardly should be surprised if the control system fails to set off an early alarm. "One could make a strong argument for starting a control system, even on the basis of inadequate academic standards, because control will reveal that some of our standards are phoney and irrelevant. We don't recommend this approach, however. First, educators and the public must confront the issues of quality and standards."[10]

Control is a Nonjudgmental Process

In order to maintain quality in any endeavor, a means must be established for obtaining and interpreting timely and accurate data. In the past, educators frequently waited until the end of the course or semester to find out, by means of a test, what the student had learned. These summative examinations were, and are, used to judge, classify and grade students. The approach suggested here uses ongoing and frequent test data to assess en route student performance to be certain that learning is occurring. It is formative in nature. This feedback corrective system makes no judgment and does not fix blame. Rather, it enables those who make instructional decisions to "get back on the track" with learners as spelled out earlier in this paper. Teachers might need to be reassured that these data are "system" problems. When it is concluded that discrepancies exist between what was desired and what is, it's possible that the principal, appropriate central office staff, AND the teacher will assume responsibility for working on the problem in any number of ways.

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[9] Leon M. Lessinger, Thorough and Efficient, Stewardship Press, Raleigh, NC

[10] Ibid, p.84

PRINCIPAL AS A MANAGER OF INSTRUCTION

Quality control begins at the classroom level with the teacher monitoring pupil progress and making adjustments early when it becomes apparent that some or all students are not achieving satisfactorily. The teacher, as quality teachers have always done, will seek other teaching techniques or tools to reach as many students as possible. Such alternatives as instructional time differentials and materials on different levels are available to teachers when they view their role as causing all students to learn and learn to mastery.

The principal's role will change from that of supervising instruction, on a hit and miss basis, to a manager of instruction who employs a scientific approach to instructional leadership. The principal will continuously monitor individual classroom learning by regularly reviewing student test data as well as the traditional classroom observation approach. The criterion referent data will be reviewed regularly to assess growth of individual students. The data will be analyzed by the principal and where unusual expectencies are not being realized, a meeting with individual teachers will be held to discuss reasons and explore alternatives.

The principal in this new role will orchestrate the process which links instruction to learning in order to optimize individual student growth.

THE CENTRAL OFFICE ROLE IN QUALITY CONTROL

The central office will receive and review data collected by the principal. The appropriate assistant superintendent will confer with the principals on the data compiled in individual schools. The learning progress data from the schools will assist the superintendent in matters such as planning in-service programs and preparing budgets, as well as fulfilling his function of carrying out board policies. In addition, this on-going process will enable the assistant superintendents to maintain quality instructional supervision on the part of principals and department heads.